

## ABSTRACT

### WATER SOLUBLE OR WATER DISPERSIBLE FLUOROCHEMICAL SILANES FOR RENDERING SUBSTRATES OIL AND WATER RELLENT

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A water soluble or water dispersible fluorochemical silane represented by the general formula:



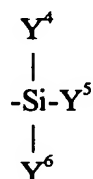
(I)

wherein X represents the residue of an initiator or hydrogen;

10  $M^f$  represents units derived from one or more fluorinated monomer;

$M^h$  represents units derived from one or more non-fluorinated monomer;

$M^a$  represents units having a silyl group represented by the formula:



(II)

15 wherein each of  $Y^4$ ,  $Y^5$  and  $Y^6$  independently represents an alkyl group, an aryl group or a hydrolyzable group;

G is a monovalent organic group comprising the residue of a chain transfer agent;

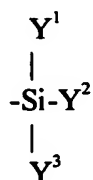
n represents a value of 1 to 100;

m represents a value of 0 to 100;

and r represents a value of 0 to 100;

20 and  $n+m+r$  is at least 2;

with the proviso that at least one of the following conditions is fulfilled: (a) G contains a silyl group of the formula:



(III)

wherein  $Y^1$ ,  $Y^2$  and  $Y^3$  each independently represents an alkyl group, an aryl group or a hydrolyzable group and at least one of  $Y^1$ ,  $Y^2$  and  $Y^3$  represents a hydrolyzable water solubilizing group; or

(b)  $r$  is at least 1 and at least one of  $Y^4$ ,  $Y^5$  and  $Y^6$  represents a hydrolyzable water solubilizing group.

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